

REMARKS

By the above amendment, the specification has been amended to correct minor informalities including the amendment of "S" and "Sa" to "5" and "5a" as pointed out by the Examiner such that the objection to the drawing as not including reference characters mentioned in the specification should now be overcome. Also, other informalities in the specification have been corrected.

Furthermore, by the present amendment independent claims 1 and 7 have been amended to delete previously recited features so as to clarify the claimed invention and now recite "a back substrate having electron sources provided within a display region on an inner surface thereof, the back substrate being arranged to face the front substrate in an opposed manner with a given distance therebetween", noting that the back substrate as illustrated in Figures 1 - 3 of the drawings is represented by the substrate 1 having electron sources on the cathode lines, as described at page 4, lines 20 - 25 of the specification, for example. Additionally, claim 1 has been amended to incorporate a portion of the features of dependent claim 3 therein with claim 7 being amended to incorporate a portion of the features of dependent claim 9 therein, in terms of an outer frame which is interposed between the front substrate and the back substrate such that the outer frame surrounds the display region so as to maintain the given distance, which outer frame is represented by the outer frame 3 as illustrated in the drawings of the application. Additionally, claims 1 and 7 have been amended to recite the feature that an inside space which is surrounded by the front substrate, the back substrate and the outer frame is sealed at a given degree of vacuum as described at page 3, lines 21 - 25 of the specification, for example, and that the distance holding members are provided within the display region.

As to the objection to the drawings, as noted above, the specification has been amended so as to conform to the reference characters utilized in the drawing and therefore, the objection to the drawings should be overcome and replacement sheets of drawings are considered unnecessary.

As to the rejection of claims 1, 2, 4 - 8 and 10 - 12 under 35 USC 103(a) as being unpatentable over Hattori (US 5,599,749) in view of Uchiyama (US 6,265,770) and the rejection of claims 3 and 9 under 35 USC 103(a) as being unpatentable over Hattori (US 5,599,749) in view of Uchiyama (US 6,265,770) further in view of Takenaka et al (US 2002/0036460), such rejections are traversed insofar as they are applicable to the present claims and reconsideration and withdrawal of the rejections are respectfully requested.

As to the requirements to support a rejection under 35 USC 103, reference is made to the decision of In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988), wherein the court pointed out that the PTO has the burden under '103 to establish a prima facie case of obviousness and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. As noted by the court, whether a particular combination might be "obvious to try" is not a legitimate test of patentability and obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. As further noted by the court, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

Furthermore, such requirements have been clarified in the decision of In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002) wherein the court in reversing an obviousness rejection indicated that deficiencies of the cited references cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge".

The court pointed out:

The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher."... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion. (emphasis added)

In applying Hattori to the claimed invention, the Examiner refers to Figure 29 thereof contending that this patent discloses "distance holding members (70) being sandwiched between the front substrate (66) and the back substrate (61)" and that "a buffering/fixing material (71) is provided between at least one of the front substrate and the back substrate and the distance holding members". Applicants note that column 21, lines 56 - 59 of Hattori provide "A getter material 71 such as Ti, Al and Mg is mounted on the side of the electron emission source in order to prevent emitted gas from attaching the emitter surface". (emphasis added). Thus, it is readily apparent that the getter material 71, contrary to the Examiner's position, is not a "buffering/fixing material", as recited in independent claims 1 and 7, and which buffering/fixing material is formed by mixing an adhesive with a highly resilient

material, which dissipates in a baking step (claim 1), or which is present after a baking step (claim 7). Applicants note that Hattori, at column 21, lines 60 - 67 indicates that the counter substrate is attached to the electron emission source by a spacer 70 coated with adhesive, and for example, glass of a low melting point is used as the adhesive, and instead of the glass spacer, adhesive such as epoxy resin containing dispersed glass beads may be used as the spacer. Additionally, it is readily apparent that Hattori does not disclose or teach the utilization of an outer frame which is interposed between the front substrate and the back substrate such that the outer frame surrounds the display region so as to maintain the given distance, with the distance holding members being arranged within the display region, and an inside space which is surrounded by the front substrate, the back substrate and the outer frame is sealed at a given degree of vacuum, as recited in independent claims 1 and 7 and the dependent claims. In this regard, it would appear that as illustrated in Figure 29, the spacers 70 apparently are utilized for spacing and for forming an outer frame. In addition to these structural differences, the Examiner recognizes "Hattori ('749) does not specifically teach the buffering/fixing material is formed by mixing an adhesive to a highly resilient material which is present after a baking step". It is noted that such feature is recited in claim 7, whereas claim 1 recites that the highly resilient material dissipates in a baking step, with the highly resilient material which dissipates being further defined in claims 4 and 5 as a low-temperature decomposing foam resin such as urethane, and the highly resilient material which is present after the baking step being further defined in claims 10 and 11 as being heat-resistant fibers such as aramid-based fibers. As apparently recognized by the Examiner, in addition to the other features, as noted above, Hattori does not disclose or teach the same in the sense of 35 USC 103.

In order to overcome the recognized deficiency of Hattori, the Examiner cites Uchiyama ('770) as teaching "the buffering/fixing material is formed by mixing an adhesive to a highly resilient material that is present after a baking step (column 7, lines 5 - 26) in order to form a stronger bond". The Examiner contends that it would have been obvious to combine the display device of Hattori ('749) with the bonding material of Uchiyama ('770) in order to produce a stronger bond within the display device.

Irrespective of this position by the Examiner, applicants note that column 7, lines 19 - 26 of Uchiyama is directed to the formation of the base material of the circuit substrate 3. Thus, applicants submit that Uchiyama ('770) teaches the structure of a substrate, which when combined with Fig. 29 of Hattori, may be considered to represent the substrate 61 or the substrate 66, in Fig. 29 of Hattori. Applicants submit that there is no disclosure or teaching in Uchiyama of the structural arrangement, as recited, noting that Fig. 3 of Uchiyama shows the arrangement of the circuit substrate 3 in relation to a liquid crystal panel 19 formed by fixing a pair of light-transmissive substrates 21a and 21b with a sealant 27 and by filling liquid crystal 22 between the substrates 21a and 21b. Thus, applicants submit that the Examiner's suggested combination of Hattori and Uchiyama represents a hindsight reconstruction attempt, in complete disregard of the teachings of the individual references, which combination fails to provide the claimed features as set forth in independent claims 1 and 7, and the dependent claims thereof. Accordingly, applicants submit that independent claims 1 and 7 and the dependent claims patentably distinguish over this proposed combination of references in the sense of 35 USC 103 and should be considered allowable thereover.

As to the further combination of Hattori and Uchiyama with Takenaka, Takenaka is cited for disclosing an outer frame, with the Examiner contending that it would be obvious to utilize the same with the other cited art. Although applicants submit that it cannot be considered obvious to utilize an outer frame in addition to spacers, in light of the disclosure of Hattori, applicants note that Takenaka et al also does not disclose or teach a buffering/fixing material which is formed by mixing an adhesive with a highly resilient material, irrespective of whether or not such highly resilient material dissipates in a baking step or is present after a baking step, which highly resilient material is further defined in the dependent claims. Thus, applicants submit that all claims patentably distinguish over this proposed combination of references in the sense of 35 USC 103 and should be considered allowable thereover.

In view of the above amendments and remarks, applicants submit that all claims patentably distinguish over the cited art and should now be in condition for allowance. Accordingly, issuance of an action of favorable nature is courteously solicited.

Applicants note that submitted herewith in order to comply with the duty of disclosure under 37 CFR 1.56 are copies of the Japanese Unexamined Patent Publications identified at page 3, lines 2 - 4 of the specification together with an English language abstract thereof, which documents are listed on a PTO Form 1449 equivalent submitted herewith.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli,

Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 501.42899X00),
and please credit any excess fees to such deposit account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

A handwritten signature in cursive script, appearing to read "Melvin Kraus", written over a horizontal line.

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